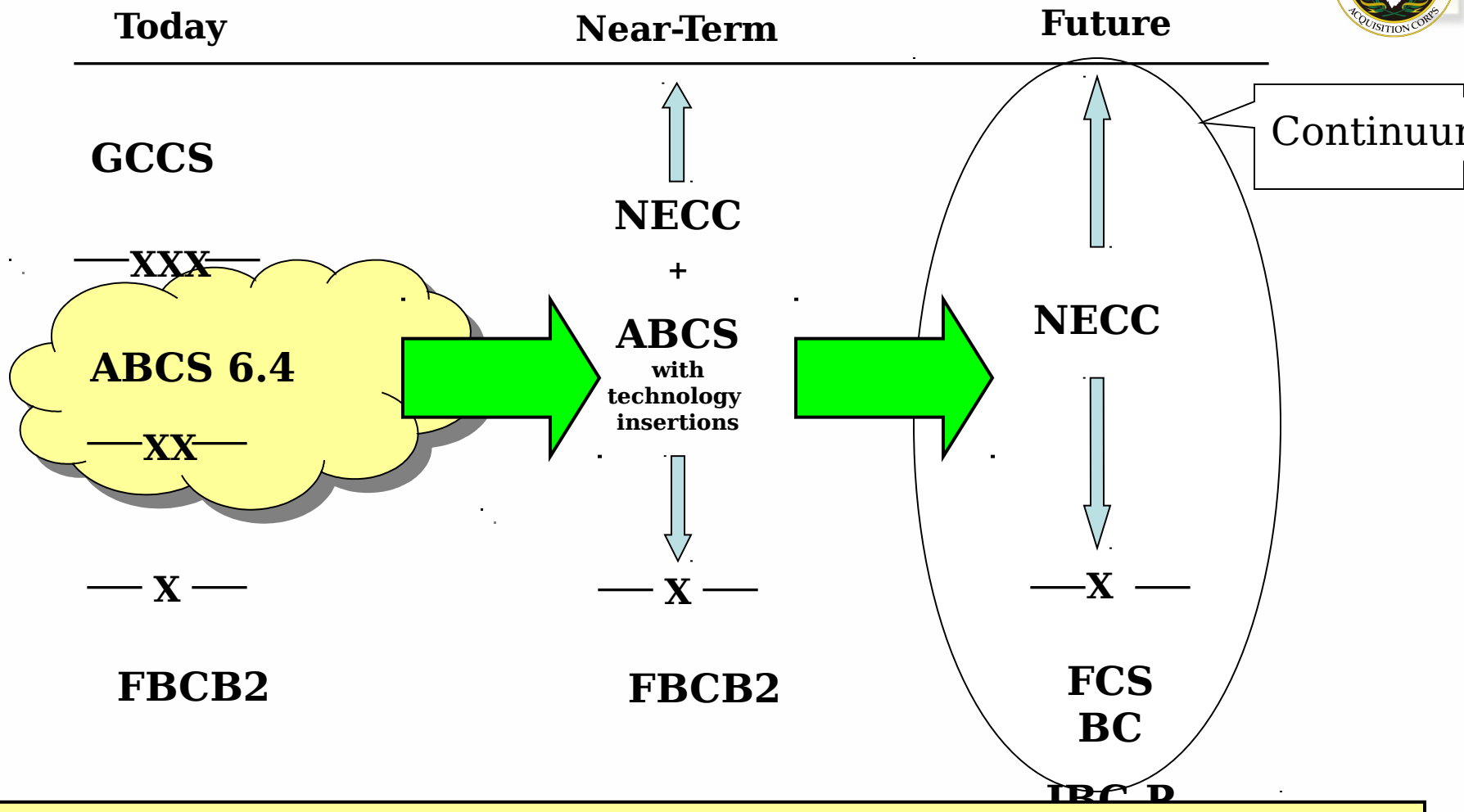
BATTLE COMMAND DEVELOPMENT & BATTLE COMMAND SYSTEM OF SYSTEMS ENGINEERING & INTEGRATION CONTRACT EFFORTS

COL HAROLD GREENE
PROJECT MANAGER, BATTLE COMMAND
732 532-4041
HAROLD-GREENE@US.ARMY.MIL

Path Forward



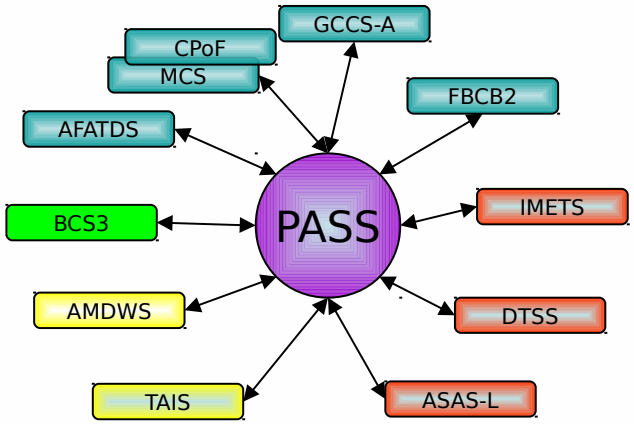
Execution of Migration Plan Underway

Technical Vision

Aligned with Battle Command Information Systems Integration and Migration

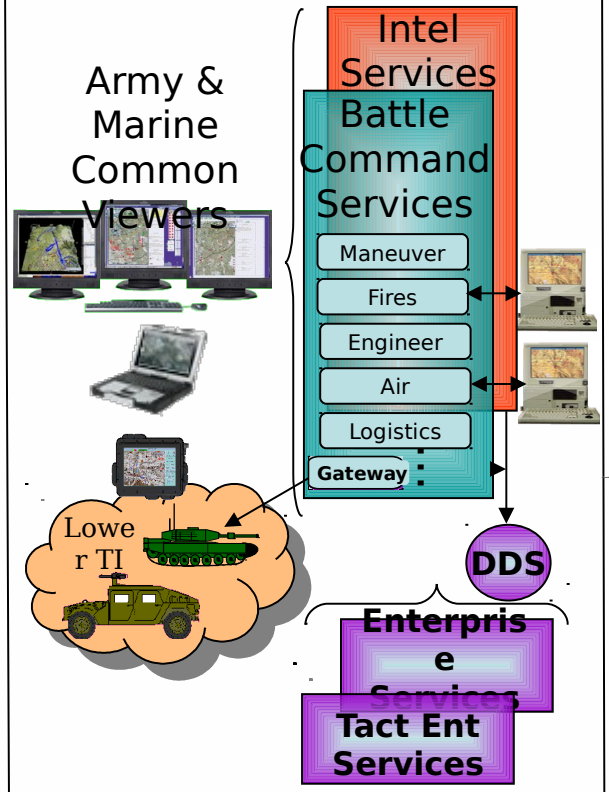
FY05-07 | FY08-10 | FY11-16

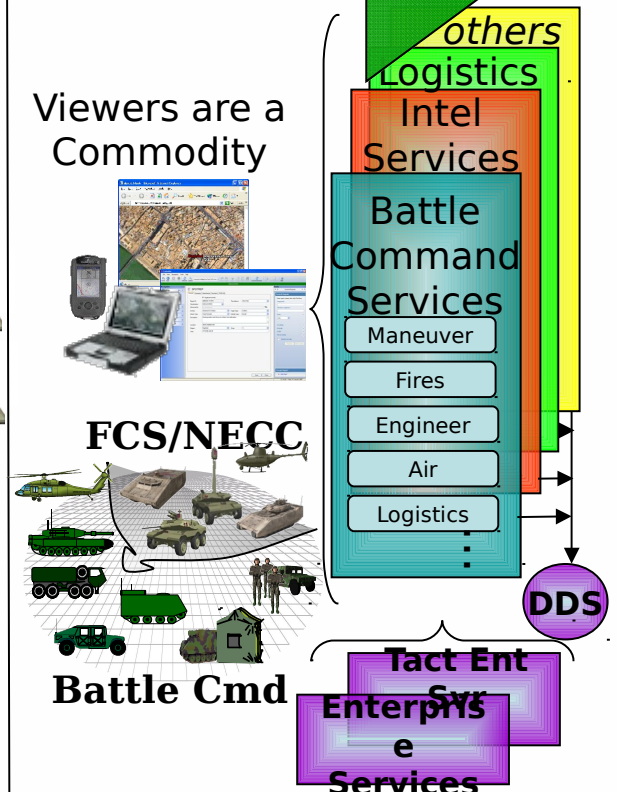
Battle Command



DCGS-A

Note: Some system 1 to 1 interfaces still exist





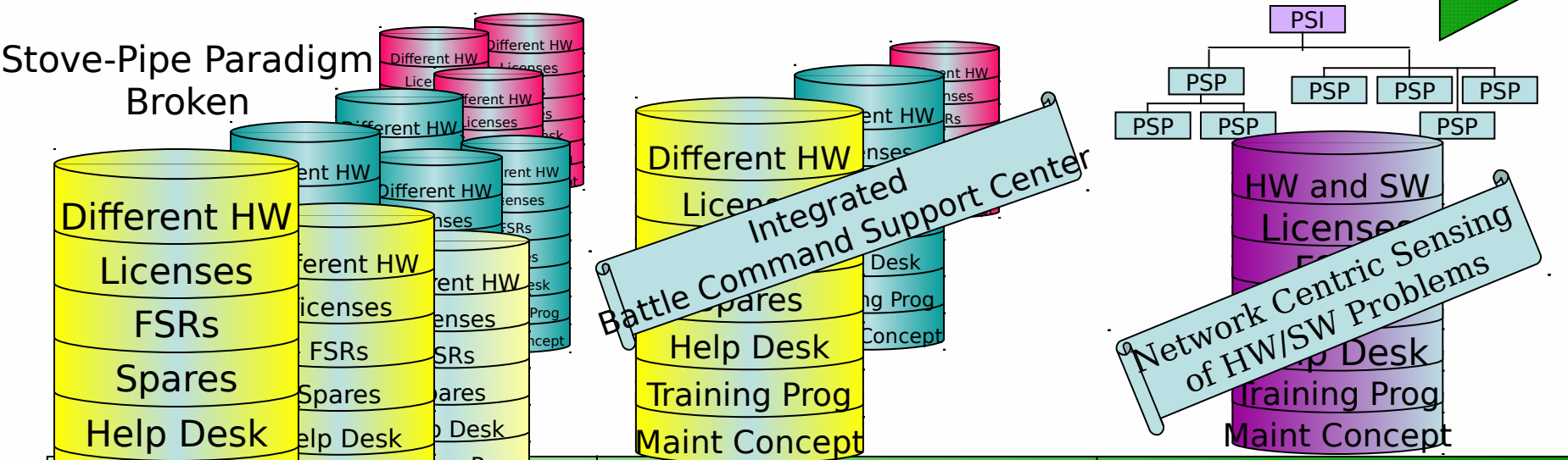
Server Enabled
- Centralized service for Data exchange using standard schemas
- System of BFA independent servers and clients

Service Enabled
- Common Viewers (Smart clients – CPoF, JTCW, Thin client – Web)
- Services start to replace servers & utilize common set of data
- Clients interface thru services

Network Enabled
- Viewers downloaded on demand (rich thin clients)
- Domain Specific Services that utilize common set of data
- Clients interface thru services

Battle Command Support and Sustainment Vision

Now FY05-07 → FY08-10 → FY11-16



System Centric Logistics Support

- Integrate System Centric Support
- Merge HW/SW Requirements
- Reduce Product Support Approaches
- FoS Supportability Strategy Evolution
- Link Service Providers and Processes
- Reduce Logistics Burden/Footprint
- Merge Budget and Contractual Vehicles
- Synchronize Training Products & Delivery

Family of Systems Centric Logistics Support

- Fewer Systems In Tactical Domain as Servers Move To Sanctuary
- Expansion Of HW/SW Diagnostics And Prognostics
- Reduced Contractors On The Battlefield
- Autonomic Logistics – Auto Order, Auto Ship – Improved Supply Chain & Inventory Management
- Remote Software Uploads/Fixes

System of Systems Centric Logistics Support

- Performance Based Logistics – One Product Support Integrator
- Support Center Control Of Systems to Effect HW/SW Maintenance
- SoS Organic Support in the Field
- No Contractors On Battlefield
- Fewer Hardware Vendors
- Lower Inventory/Warehouse Needs
- Dynamic Systems With Auto Software Re-Config Capability

BC SoS Acquisition Migration Plan

FY07 → **FY08-12**

Current Acquisition Effort w/ Migration Planning

System Centric Acquisition

- Resourcing in Multiple Contracts for SoS Architectural (framework/vision) and Engineering (documentation) teams
- No contractual vehicle for SoS integration
- SoS Pre CTSF IVV Contractual Vehicle Non Existent
- No contractual vehicle for SoS logistics planning
- Minimal NECC Army CPMO Contractual Support
- Individual System Contracts for Development
- Common Viewer Development Effort Over Multiple Vehicles
- Initial Contractual Services

SoS Acquisition Migration Initiatives

SoS Centric Acquisition

- Single PM BC SoS Engineering & Integration (SSEI) Task Order via S3
  - Centralized Contractual Resources for PM BC
  - SoS Architecture Support
  - SoS Engineering (requirements, design)
  - SoS integration & test (pre CTSF)
  - SOS logistics planning
  - Field Service Support, Training Team Support & Material Fielding Team Support
- Consolidated PM BC Development contract for:
  - Competitive multi-award IDIQ with CPAF and T&M
  - Continued SE, Development, Maintenance and functional domain capability test & integration support for PM
  - Service development

S3 CONTRACT OPPORTUNITY

- TITLE: BATTLE COMMAND SYSTEM OF SYSTEMS ENGINEERING & INTEGRATION
- CONTRACT TYPE: T&M S3 TASK ORDER; 4 YR BASE PLUS OPTIONS IAW S3 OPTION SCHEDULE
- ESTIMATED VALUE: $556M (OVER BASE + OPTION)
- KEY MILESTONES: ISSUE S3 PERFORMANCE WORK STATEMENT: 3QFY07
  FORECAST AWARD: 4QFY07
- TECHNICAL CONTACT: PM BATTLE COMMAND, BARBARA GIRGUS, 732 532-2947
- ACQUISITION CONTACT: JAN OBERDICK
  732-532-5557
- SOLICITATION #: TBD

OCI Exclusion

- The S3 SoSE&I contractor and their sub contractors will be excluded from award of any of the Multi-Award Development Contract efforts

Battle Command SOSE&I Scope

- SoS Engineering:
  - Synchronize engineering efforts to provide net centric services and harmonize system architectures and development activities to achieve Battle Command Migration goals.
  - Developing SoS level System Engineering Documentation
  - Conducting SoS Level Design Reviews
  - Leverage and contribute to emerging NECC, DCGS-A and FCS services, evolving Commercial Off the Shelf technology
  - Define BC software blocking requirements to ensure SoS requirements are met based on user priorities and SoS oriented migration objectives
  - Define SoS common component/service requirements and make development allocation recommendations
  - Document architectural design, interface specifications, test plans, etc.
  - Support Army Component Program Management Office for NECC in developing Engineering Capability Module proposals, participate in NECC system engineering processes, and oversee integration and development activity of Army provided services

Battle Command SOSE&I Scope

- SoS Integration & Test
  - Conduct integration and test activities across the Battle Command family to validate service interaction, interfaces and performance
  - Provide the environment or leverage existing/distributed or centralized environments to support integration and validation effort
  - Support integration activity at the SoS level to validate product capability, performance and interoperability.
  - Provide an interface to PM BC developers
  - Integrate common services where applicable

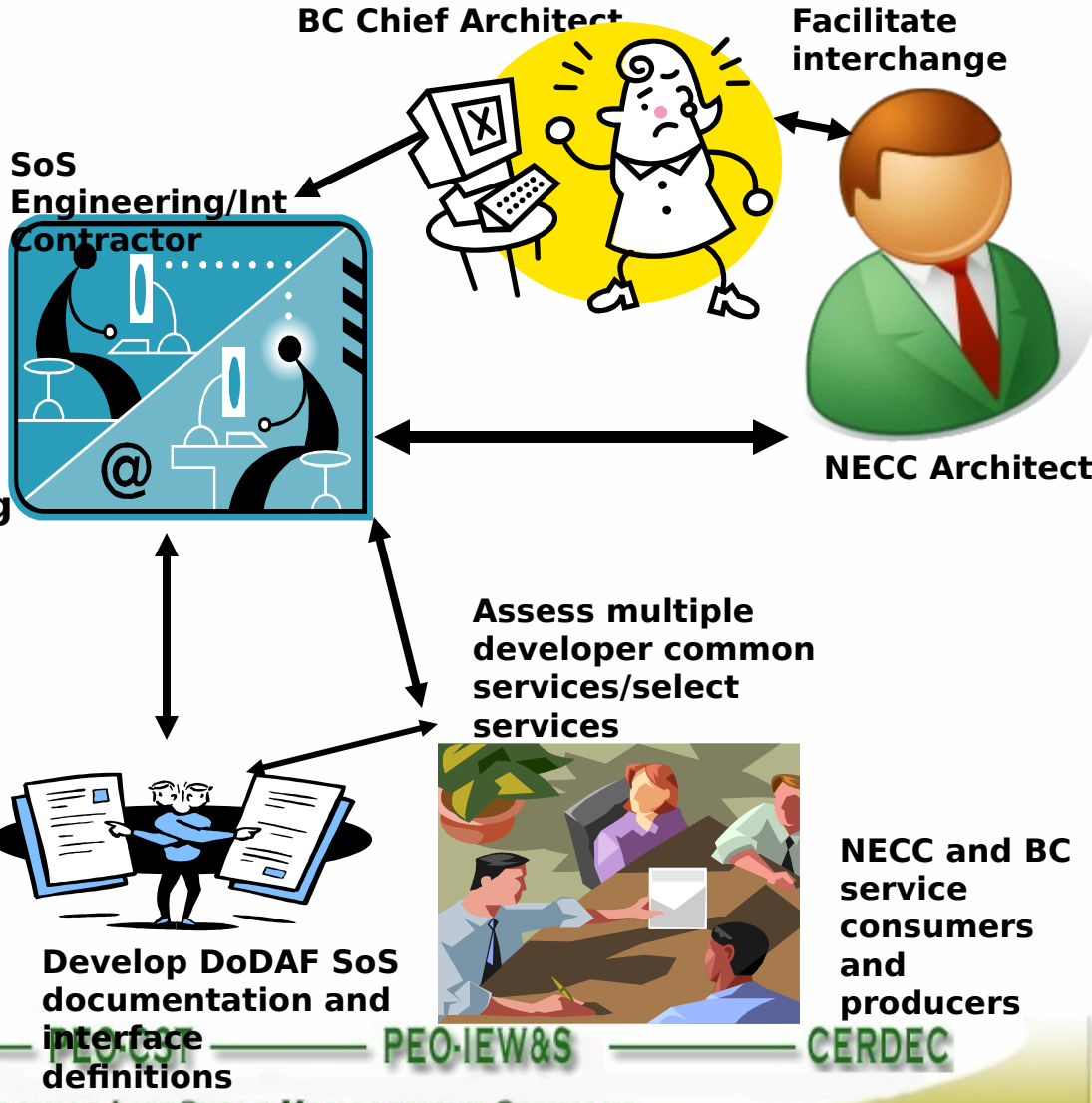
- Support Independent Verification and Validation
  - Develop test threads and plans
  - Conduct V&V for horizontal interoperability and vertical functionality

Battle Command SOSE&I Scope

- System of Systems Logistics
  - Define SoS oriented logistics, training concepts and processes to capitalize on the SoS environment and to minimize training and support burden across the Battle Command users
  - Support formulation of those processes and development of common SoS oriented products to include: Single Interface to the Field, Help Desk Support, Technology application to reduce logistics, training and usability burden, Performance Based Logistics
- Product Level Logistics:
  - Provide Battle Command product specific logistics and training documentation for products based on evolution of the systems
- Field and Training support Across BC systems
  - Provide product level field support representatives and training support teams with cross trained field representatives to provide support across the BC family in a manner that capitalizes on and leverages SoS activity and ensures product level support

NECC/BC Integrated SoS Engineering Support

- **Establish architecture integrating NECC, TBC and BC migration initiatives in compliance with NECC architectural standards**
- **Define SoS common component/service requirements**
- **Allocate requirements for common infrastructure and application oriented service development among NECC services, TBC/BCCS services, COTS providers and other BFA providers**
- **Develop SE DoDAF products across the Army SoS**
- **Document SoS Army design for common infrastructure and application centralized services and distributed services**
- **Develop API specifications, WSDL's service interface definitions for common services**


BC Chief Architect
Facilitate interchange
SoS Engineering/Int Contractor
NECC Architect
Assess multiple developer common services/select services
Develop DoDAF SoS documentation and interface definitions
NECC and BC service consumers and producers

Army Component Program Management Office Support

Proponent developer/PM submits ECM proposal

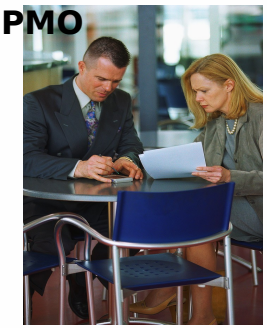
Refinement of proposals & coordination for acceptance/funding

SoS Eng'g & Integration contractor and Army CPMO

Analysis & Assessment of Proposals

- ***Needed functionality?***
- ***Infrastructure supported in NECC environment?***
- ***Performance requirements achievable?***
- ***Proper standards (NECC/BCCS, etc.) met?***
- ***Cost, supportability, architectural fit***
- ***Alternatives?***

Oversight/coordination with proponent developer for implementation (build schedule, SWB schedules, NECC schedules, checkpoints)



Coordination of ECM proposals for Army

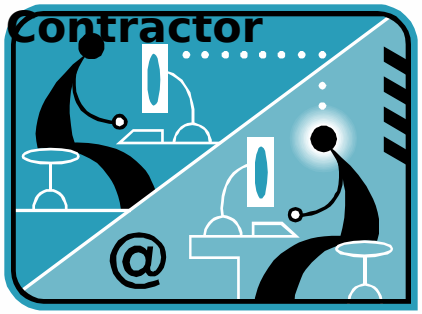
Proposal recommendations & coordination with NECC for acceptance/funding

PEO-EIS — CECOM — PEO-C3T — PEO-IEW&S — CERDEC

COMMUNICATIONS-ELECTRONICS LIFECYCLE MANAGEMENT COMMAND

System Integration/Testing Activity

SoSE&I Contractor



Validate services delivered by Army meet NECC standards (discovery, registration, IA, etc.)

Provide feedback to developers for refinement

Development Contract

NECC Consumer

Provide feedback/support in interface efforts

Army Consumer

Provide service interface definition (API, WSDL, etc.) to NECC and Army BFA consumers for interface efforts

SoSE&I Contractor

Test services in integration environment/feedback to developer

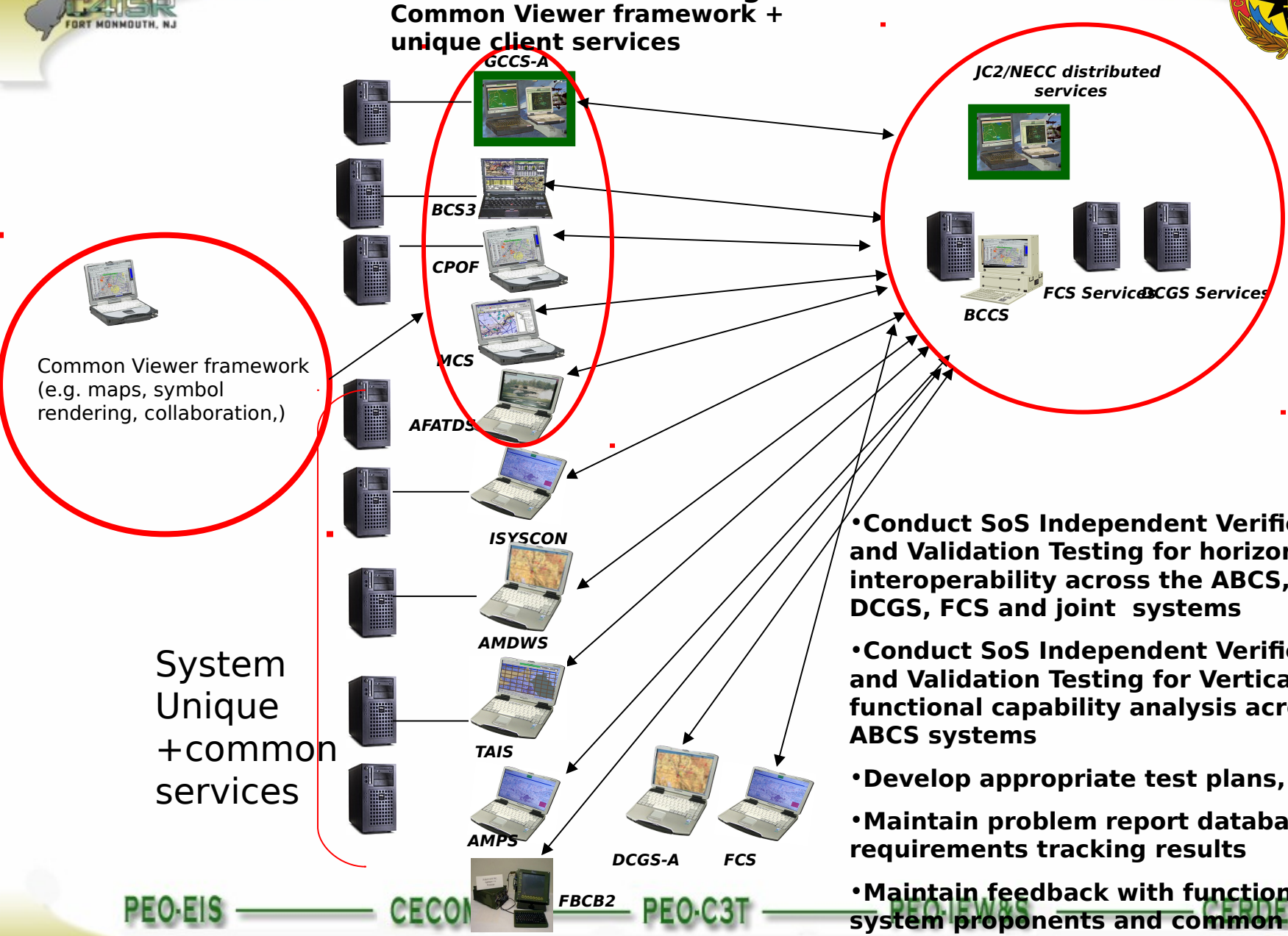
SoSE&I Contractor

Test services in SoS (IV&V) environment & support NECC & CTSF test environment

Integrate common services where applicable (centralized server, e.g. BCCS, etc.)

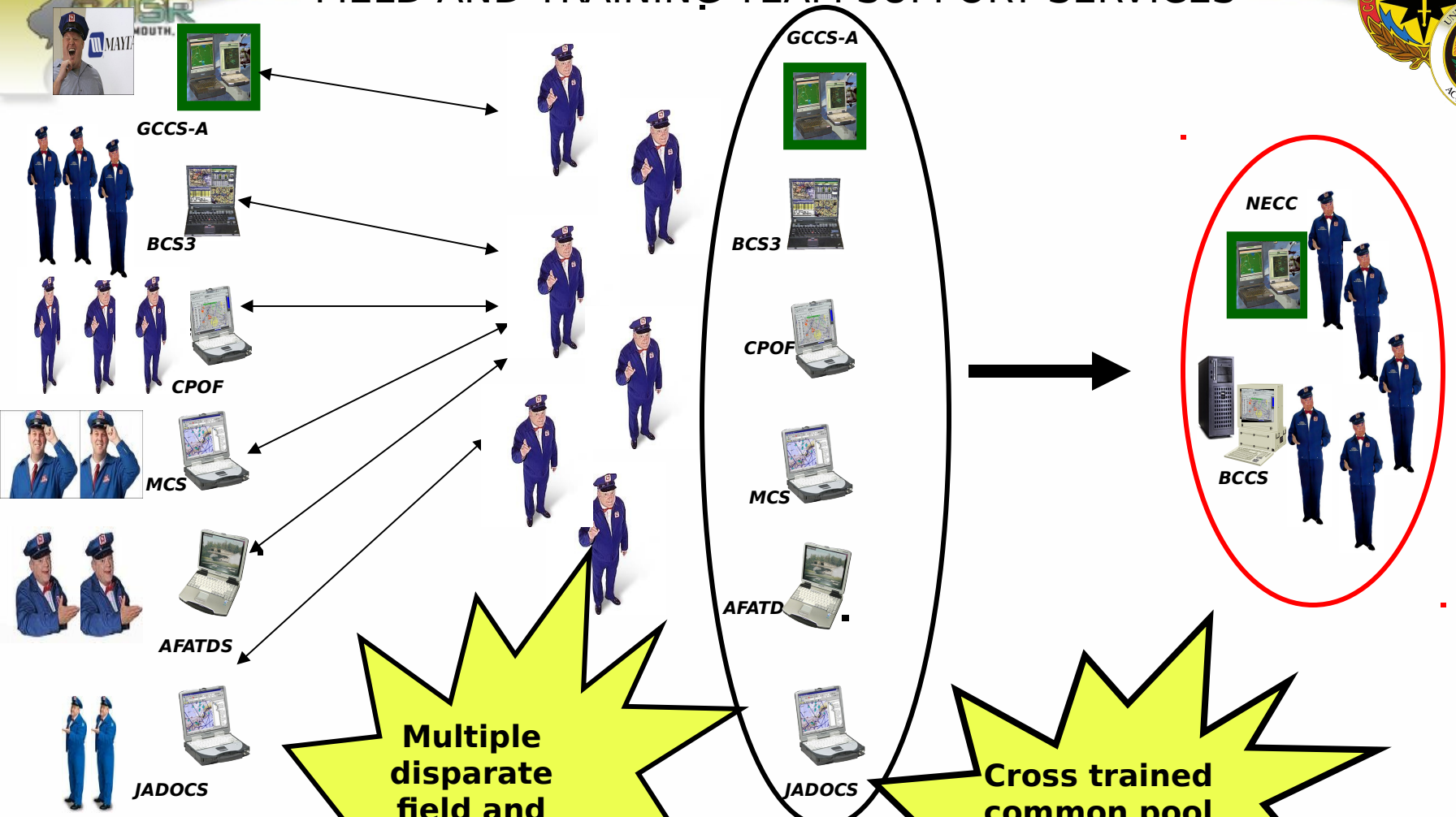
SoSE&I Contractor

SoS and System Level Independent Verification & Validation Testing



- **Conduct SoS Independent Verification and Validation Testing for horizontal interoperability across the ABCS, NECC, DCGS, FCS and joint systems**
- **Conduct SoS Independent Verification and Validation Testing for Vertical/BFA functional capability analysis across the ABCS systems**
- **Develop appropriate test plans, threads**
- **Maintain problem report database and requirements tracking results**
- **Maintain feedback with functional system proponents and common service developers**

FIELD AND TRAINING TEAM SUPPORT SERVICES



OPPORTUNITY

- TITLE: BATTLE COMMAND DEVELOPMENT
- CONTRACT TYPE: IDIQ, 5 YR BASE PLUS 5 ONE YEAR OPTIONS, CPAF AND T&M
- ESTIMATED VALUE: $827M (OVER BASE + OPTION)
- KEY MILESTONES: ISSUE RFP: 4QFY07
  FORECAST AWARD: 1QFY08
- TECHNICAL CONTACT: PM BATTLE COMMAND, LINDA JOHNSTON, 732 427-5956
- ACQUISITION CONTACT: JOHANNA HERSCH 732-532-5798
- SOLICITATION #: TBD

BATTLE COMMAND DEVELOPMENT CONTRACT SCOPE

- Flexible, Indefinite Delivery, Indefinite Quantity multi-award contractual vehicle for providing service and system specific development across the Battle Command products

- Battle Command Products Included:
  - Advanced Field Artillery Tactical Data System (AFATDS)
  - Lightweight Forward Entry Device (LFED), Pocket-Sized Forward Entry Device (PFED), Gun Display Unit-Replacement (GDU-R), Centaur
  - Battle Command Sustainment Support System (BCS3)
  - Command Post of the Future (CPOF)
  - Common Software (CS)
  - Global Command Control System-Army (GCCS-A) and evolving Army components of Network Enabled Command & Control System (NECC)
  - Joint Automation Deep Operations Coordination System (JADOCS)
  - Theater Effects Based Operations (TEBO) ACTD
  - Maneuver Control System (MCS)
  - Battle Command Common Services (BCCS)

BATTLE COMMAND DEVELOPMENT CONTRACT SCOPE

- The effort will support:
  - Migration of Battle Command systems to a service oriented, network centric architecture
  - Software development of functional domain specific needs of the BC systems (interoperability, specific performance improvements, specific user prioritized system needs)
  - Maintenance support services for legacy product baselines in the transition period to a full service oriented architecture
  - Integration and test of functional domain specific and SoS oriented services
  - Design/Development documentation

PM BC Development Contract Effort

DEVELOPERS

Common Centralized Services

Common Distributed Services

Common client/common viewer services

Functional Capability development

Legacy System Maintenance

SOSE&I Contractor

•Define to developers allocated SoS requirements & design constraints

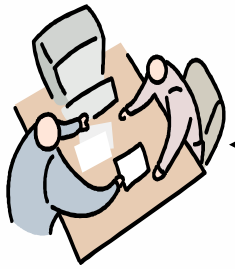
Coordinate to develop SoS build plan/schedule and assess status iteratively with developers

Coordinate on SoS sw design with developers

Provide iterative software demo's/feedback on progress for SoS software

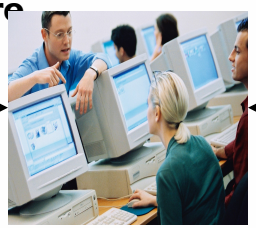
Deliver common services

Deliver integrated Domain Functional Capability



Developers Design Software

Develop code/unit test



Integrate where applicable (e.g. common server/viewer & BFA specific)

Conduct service level testing, integ testing, CTSF/NECC test support

Questions?